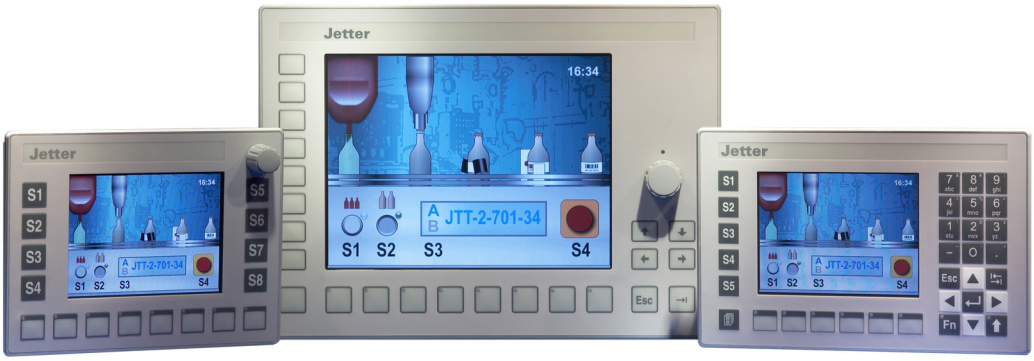
JetView 200/300 Series

Full-Graphics HMIs



JetWeb

User Manual

Jetter
Automation. Made easy.

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Revision 3.00

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Assignment to product

This User Manual belongs to the the JetView 200/300 Series:

Type:	
Serial #:	
Year of construction:	
Order #:	

CE

To be entered by the customer:

Inventory #:	
Place of operation:	

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Significance

Significance of the User Manual

The User Manual is an integral part of the JetView 200/300 Series and

- of the JetView 200/300 Series must be kept in a way that it is always at hand, until it will be disposed of
- if the module is sold or loaned/leased out, of the JetView 200/300 Series has to be passed on

In any case you encounter difficulties to clearly understand this User Manual, please contact the manufacturer.

We would appreciate any suggestions and contributions on your part and would ask you to contact us by our e-mail address info@jetter.de. This will help us to produce manuals that are more user-friendly and to address your wishes and requirements.

This User Manual contains important information on how to transport, erect, install, operate, maintain and repair of the JetView 200/300 Series.

Therefore, the persons carrying out these jobs must carefully read, understand and observe this User Manual, and especially the safety instructions.

Missing or inadequate knowledge of the User Manual results in the loss of any claim of liability on part of Jetter AG. Therefore, the operating company is recommended to have the instruction of the persons concerned confirmed in writing.

History

Revision	Comment
1.00	Original issue
2.00	See "Recent Revisions" - Revision 2.00
3.00	For **Recent Revisions** on page 83

Hazard Levels

Introduction

This topic describes the safety labels and hazard levels used in this manual.

Safety Labels

Signs using this symbol are to warn you of inuries or even death. It is imperative to follow the instructions to prevent hazards.

Hazard Levels

Safety information is classified into the following hazard levels:

Hazard Level	Consequences	Probability
DANGER	Death/severe injury (irreversible)	The hazard is imminent.
WARNING	Death/severe injury (irreversible)	Potential occurrence
CAUTION	Slight injury (reversible)	Potential occurrence
CAUTION	Material damage	Potential occurrence

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1 Safety Instructions

Introduction

This chapter contains the general safety instructions and warns of possible residual dangers.

Contents

This chapter contains the following topics:

Topic	Page
Generally Valid Safety Instructions	10
Ensure Your Own Safety	12

Generally Valid Safety Instructions

Introduction

This device complies with the valid safety regulations and standards. Special emphasis was given to the safety of the users.

Of course, the user should adhere to the following regulations:

- relevant accident prevention regulations;
- accepted safety rules;
- EC guidelines and other country-specific regulations

Intended Conditions of Use

Usage according to the intended conditions of use includes operation in accordance with this User Manual.

The JetView 200/300 Series is a built-in model which has been designed and approved for operation in a metal housing only. You can make the most of your JetView 200/300 Series if integrating it into a network.

The operating voltage of the JetView 200/300 Series is DC 24 V. This operating voltage is classified as SELV (Safety Extra Low Voltage).

Therefore, the JetView 200/300 Series is not subject to the EU Low Voltage Directive.

The JetView 200/300 Series may only be operated within the limits of the stated data, see **chapter Technical Data** on page 85.

Do not apply a voltage to the HMI that is higher than the specified operating voltage.

The JetView 200/300 Series is used to control machinery, such as conveyors, production machines, and handling machines. Furthermore, it can be used for remote maintenance of machinery.

Usage Other than Intended

This device must not be used in technical systems which to a high degree have to be fail-safe, e. g. ropeways and aeroplanes.

If the device is to be run under ambient conditions which differ from the conditions mentioned in chapter **Operating Condition** on page 87, the manufacturer is to be contacted beforehand.

Who may Operate the Device?

Only instructed, trained and authorized persons are permitted to operate this device.

Transport:	Only by personnel with knowledge in handling electrostatically sensitive components.
Installation:	Only by specialists with training in electrical engineering.
Engineering:	Only by trained personnel, as specific know-how of electrical engineering is required.
Commissioning:	Only by specialists with profound knowledge of, and experience with, electrical engineering / drive technology

Modifications and Alterations to the Device

For safety reasons, no modifications and changes to the device and its functions are permitted.

Any modifications to the device not expressly authorized by the manufacturer will result in a loss of any liability claims to Jetter AG.

The original parts are specifically designed for the device. Parts and equipment from other manufacturers are not tested on our part, and are, therefore, not released by us.

The installation of such parts may impair the safety and the proper functioning of the device.

Any liability on the part of Jetter AG for any damages resulting from the use of non original parts and equipment is excluded.

Repair and Maintenance

This device must not be repaired by the operators themselves. The device does not contain any parts that could be repaired by the operator.

The device must be sent to Jetter AG for repair.

If this HMI is equipped with a backup battery, this battery must be replaced every 3 years.

To prevent battery acid from leaking, the battery must be replaced even if it is still functioning.

Except for battery replacement, the HMI is maintenance-free. Therefore, absolutely no inspection or maintenance works are required for the operation of this device.

Decommissioning and Disposal

The environmental regulations of the respective country must be complied with when decommissioning and disposing of devices on the operating company's premises.

Ensure Your Own Safety

Caution

Follow this procedure in order to ensure your own safety:

Measures	Action
1	Isolate the device from the mains, if maintenance works have to be carried out. By doing so, you will prevent accidents resulting from electric voltage and moving parts.
2	Safety and protective devices, e.g. the barrier and cover of the terminal box must never be shunted or by-passed.
3	Dismantled protective equipment, such as guards, must be reattached prior to commissioning and checked for proper functioning.
4	Prior to commissioning, the machine manufacturer shall conduct a hazard analysis for the machine and take appropriate measures to prevent personal injury and damage to property resulting from accidental movements.

Malfunctions or Other Damages

Follow this procedure in the case of malfunctions or damages:

Measures	Action
1	**Immediately separate the device from the mains.**
2	The device must be protected from improper or inadvertent use.
3	Malfunctions or other damages are to be reported to a responsible person at once.

Information Signs and Labels

Markings, information signs, and labels always have to be observed and kept readable.

Damaged or unreadable information signs and labels have to be replaced.

2 Engineering

Introduction

This chapter describes the functions of of the JetView 200/300 Series.

Contents

This chapter contains the following topics:

Topic	Page
Product Description - JetView 200/300	14

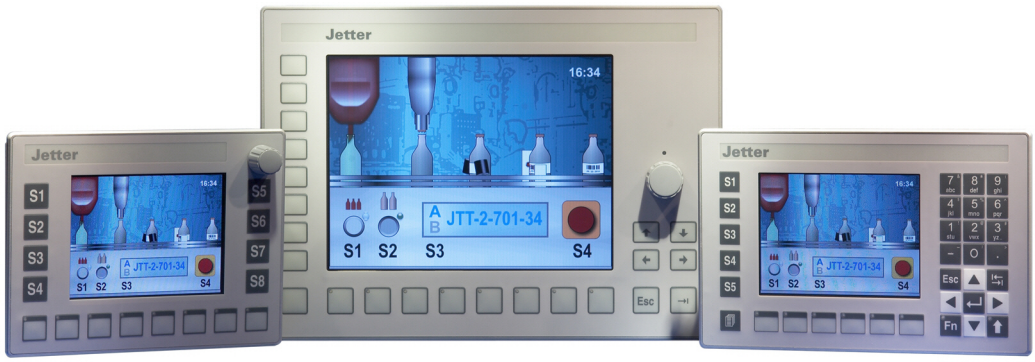
Product Description - JetView 200/300

JetView 200/300 Series

The JetView 200/300 Series is a line of compact full-graphics HMIs.

Characteristics

The following list shows the characteristics of this module:



- TFT/CSTN color display
- Keyboard, digipot, touch screen
- Touch screen
- Function Keys
- Softkeys
- RS-232, RS-422/485, Ethernet 10/100T, MMC/SD memory card, 2x USB host

Additional Functions

Additional Options:

- Speakers
- CAN Interface

Scope of Delivery

The JetView 200/300 Series is shipped with the following accessories:

Quantity	Description
1	JetView 200/300 Series
1	4 screw plug terminals (JV-205/305)
1	Power supply terminal

3 Mounting

Introduction

This chapter contains information on the physical dimensions of the JetView and its installation. To fasten a JetView 205/305 screw clamps are used, while for a JetView 310 stud bolts with corresponding nuts are used.

Contents

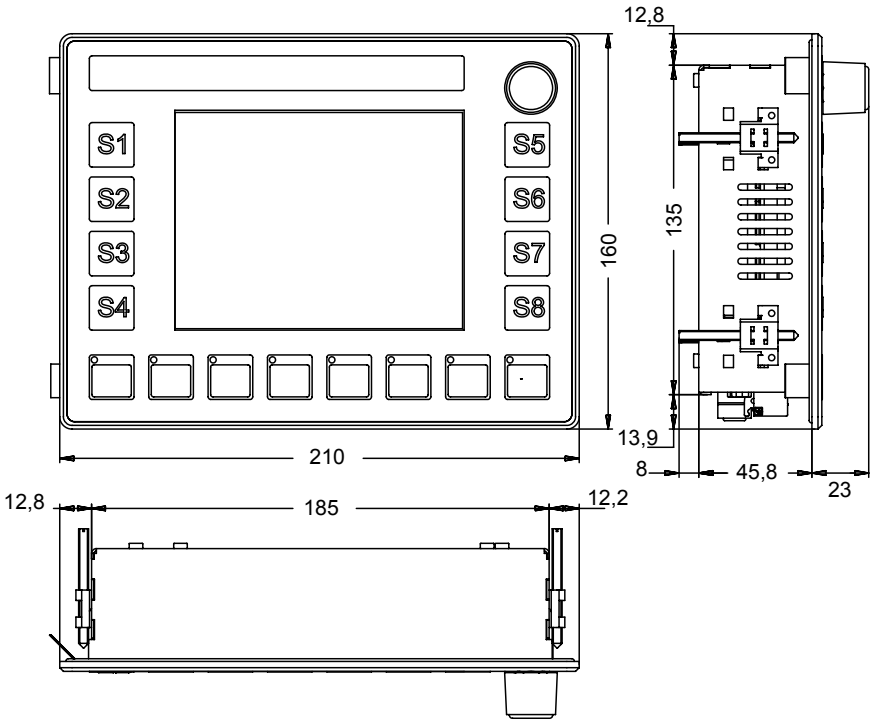
This chapter contains the following topics:

Topic	Page
Physical Dimensions	16
Installing a JetView 205/305	19
Installing the JetView 310	21

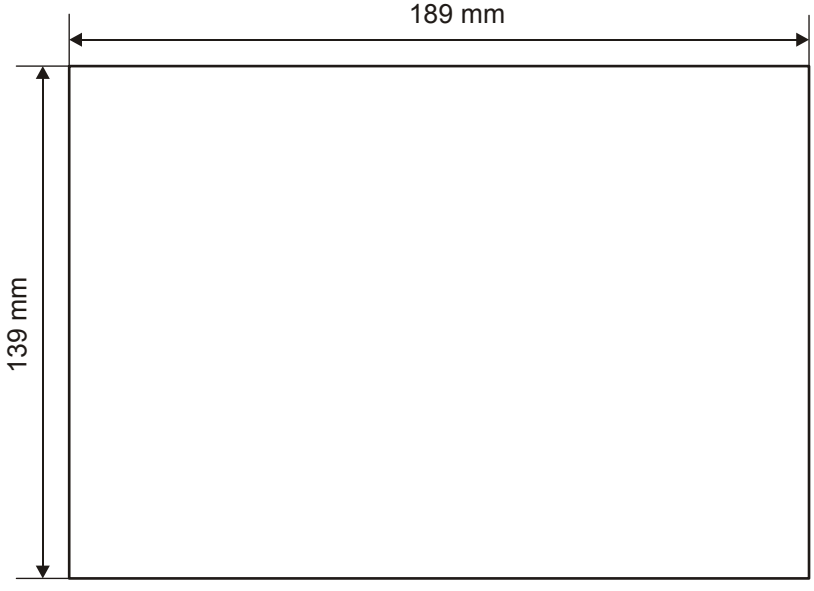
Physical Dimensions

Dimensions of, and Front Panel Cutout for JetView 205/305-TA-DP

The following illustration shows the physical dimensions of a JetView 205/305-TA-DP:

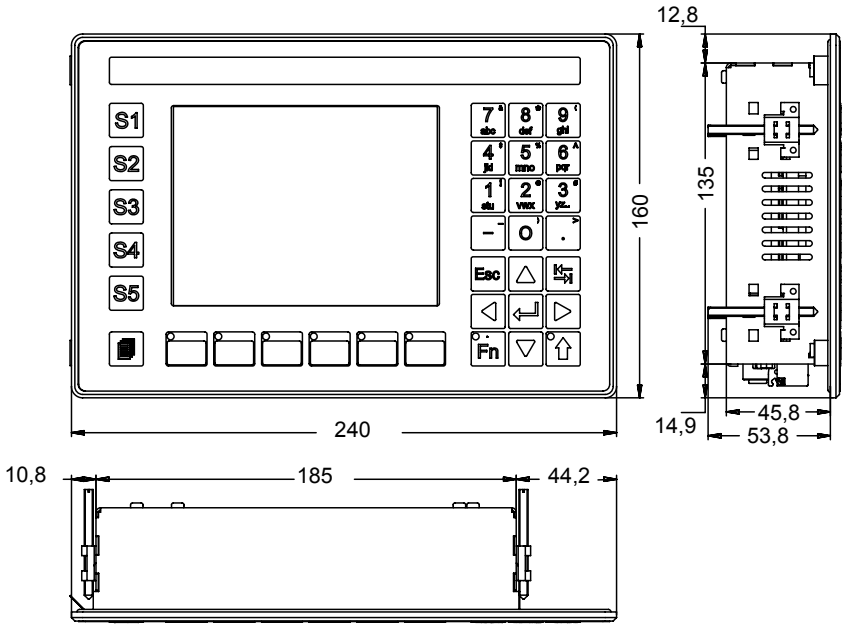


The following illustration shows the cutout for mounting the module:

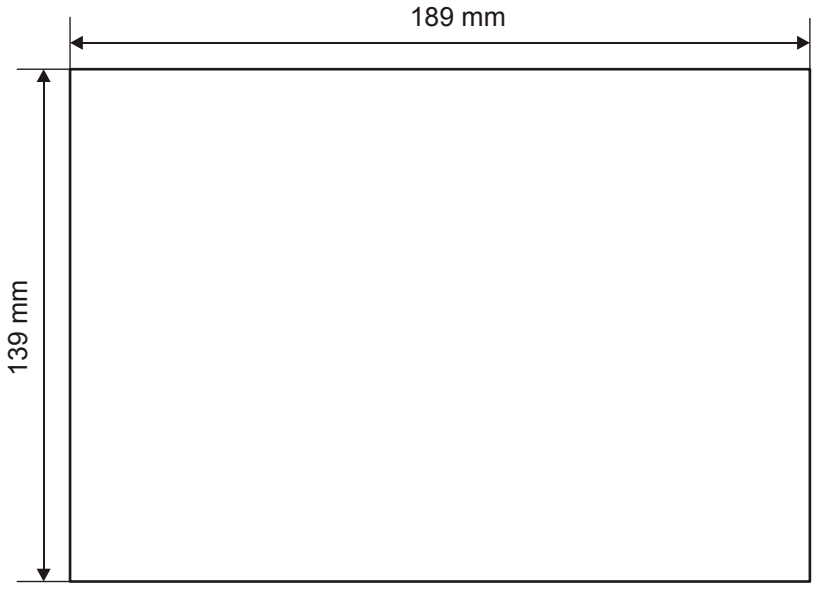


Dimensions of, and Front Panel Cutout for JetView 205/305-ZB

The following illustration shows the physical dimensions of a JetView 205/305-ZB:

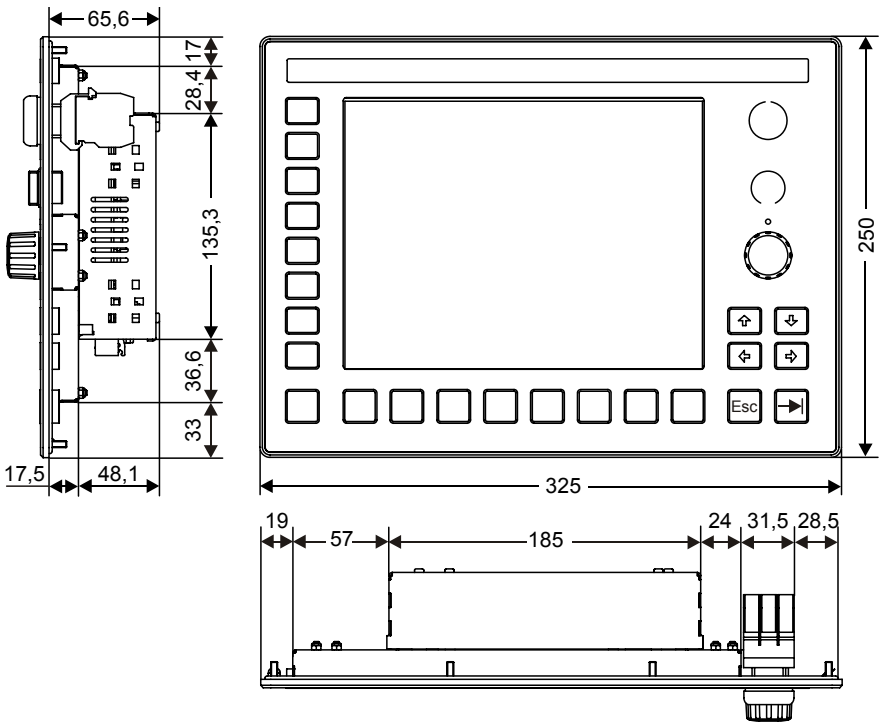


The following illustration shows the cutout for mounting the module:

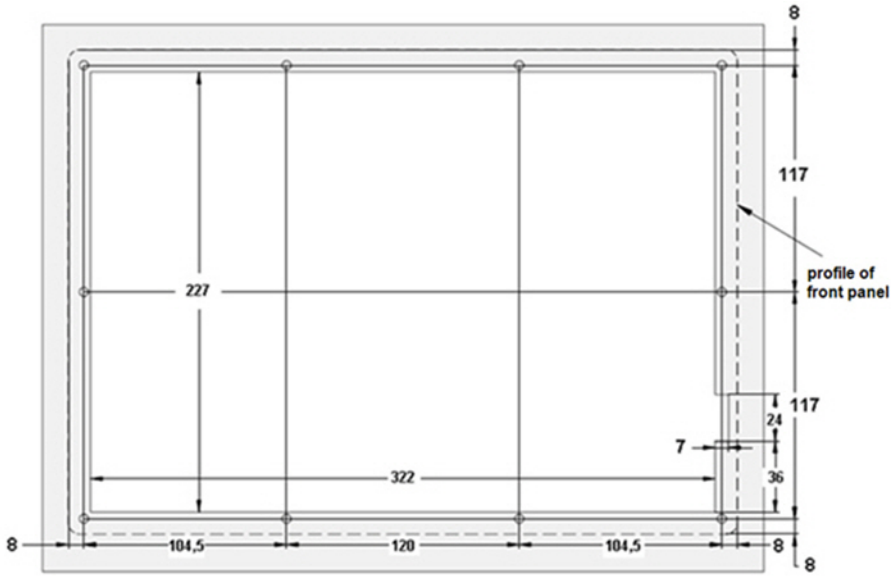


Dimensions of, and Front Panel Cutout for JetView 310

The following illustration shows the physical dimensions of a JetView 310:



The following illustration shows the cutout for mounting the module:



Related Topics

- **Technical Data** on page 85
- **Installing a JetView 205/305** on page 19 / **Installing a JetView 310** on page 21

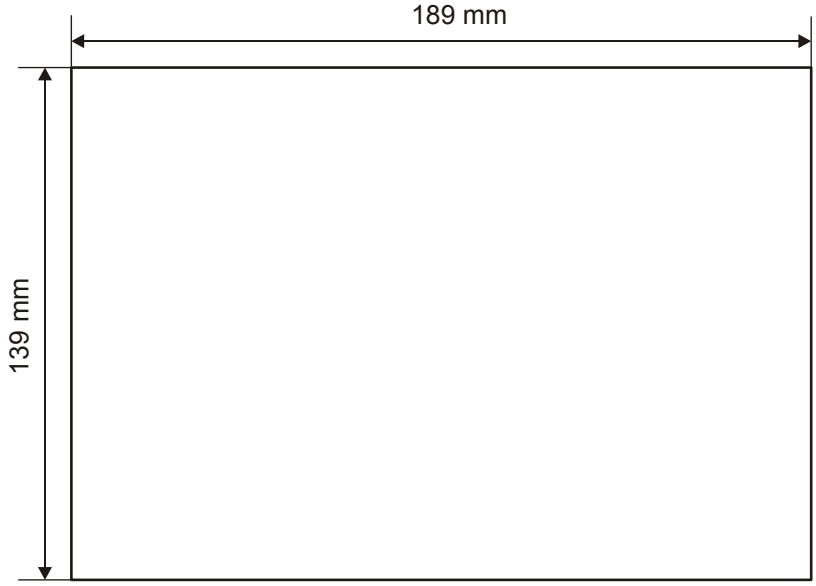
Installing a JetView 205/305

Introduction

This chapter describes how a JetView 205/305 is installed, for instance, in an electric cabinet.

Prerequisite

The cutout for the front panel has to be produced beforehand.



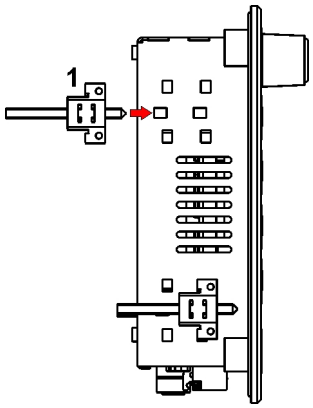
What is required for installation?

The following parts/tools are required for installation:

- 4 screw clamps included in the scope of delivery
- A flat-bladed screwdriver

Installing the JetView

Take the following steps to install a JetView 205/305:

Step	Action
1	Insert the JetView into the cutout.
2	Attach the 4 screw clamps (**1**) to the JetView.  The attachment point of the screw clamps may vary depending on the wall thickness.
3	Tighten the screws of the 4 clamps using the screwdriver.

Related Topics:

- **Installing a JetView 310** on page 21

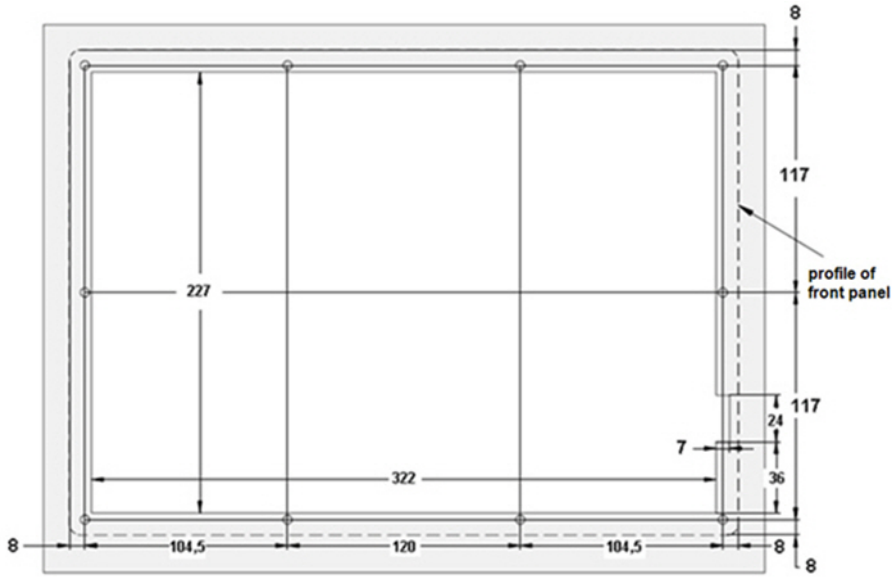
Installing the JetView 310

Introduction

This chapter describes how a JetView 310 is installed, for instance, in an electric cabinet.

Prerequisite

The cutout and holes for the stud bolts M 4 have to be produced beforehand.



What is required for installation?

The following parts/tools are required for installation:

- 10 nuts for stud bolts M 4
- A wrench for tightening the nuts.

Installing the JetView

Take the following steps to install a JetView 310:

Step	Action
1	Insert the JetView into the cutout.
2	Attach the 10 nuts to the stud bolts of the JetView 310 and screw them down.

Related Topics:

- **Installing a JetView 205/305** on page 19

4 Installation

Introduction

This chapter describes how the power supply is connected and how a JetView is connected to a PC, a controller or a switch. Furthermore, this chapter describes how removable media and input devices are to be connected.

Contents

This chapter contains the following topics:

Topic	Page
Instructions on EMI	24
Power Supply	27
Connection with the Controller and PC	30
Removable Media and Input Devices	34

4.1 Instructions on EMI

Introduction

This chapter informs of measures for increasing immunity to interference.

Contents

This chapter contains the following topics:

Topic	Page
Instructions on EMI	25

Instructions on EMI

Noise Immunity of a System

The noise immunity of a system depends on the weakest component of the system. For this reason, correct wiring and shielding of cables is of paramount importance.

Measures

Measures for increasing EMI in electric plants:

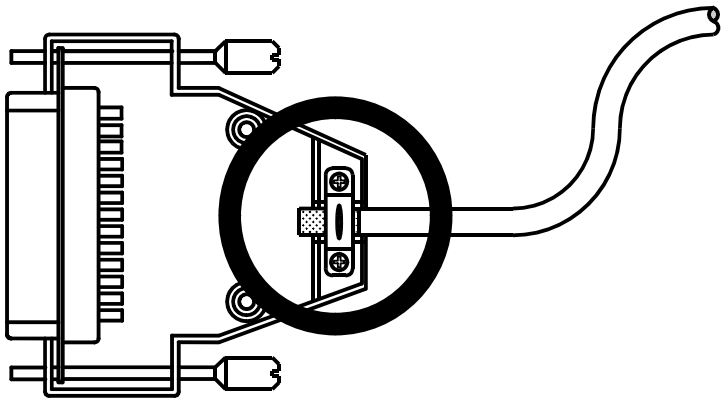
- Follow the instructions given in Application Note 016 "EMC-Compatible Installation of the Electric Cabinet" published by Jetter AG.

The following instructions are excerpts from Application Note 016:

- On principle, **physical separation** should be maintained between signal and power lines. We recommend spacings greater than 20 cm. Cables and lines should cross each other at an angle of 90°.
- The following line cables must be shielded:
  Analog lines, data lines, motor cables coming from inverter drives (servo output stage, frequency converter), lines between components and interference suppressor filter, if the suppressor filter has not been placed at the component directly.
- Shield cables **at both ends**.
- Unshielded wire ends of shielded cables should be as short as possible.
- The entire shield **must**, in its entire perimeter, be drawn behind the isolation, and then be clamped under an earthed strain relief **with the greatest possible surface area**.

When male connectors are used:

- The shield (impedance shielding) **must**, in its entire perimeter, be drawn behind the shielding clamp of the metallized connector housing, respectively of the EMC gland bushing, its greatest possible surface area being clamped under a strain relief.
- Only use metallized connectors, e.g. SUB-D with metallized housing. Please take care of direct connection here as well.



Download of Application Note 016	You can download Application Note 016 from our **Jetter homepage** http://www.jetter.de. The path leading to Application Note 016 "EMC-Compatible Installation of Electric Cabinets" is "Industrial Automation - Support - Downloads - Miscellaneous - Application Notes".

4.2 Power Supply

Introduction

This chapter contains information on how power supply is connected to a JetView.

Contents

This chapter contains the following topics:

Topic	Page
Connecting the Voltage Supply	28

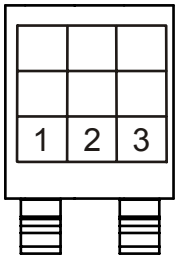
Connecting the Voltage Supply

Introduction

For connecting the voltage supply to a JetView connector **X10** is used (see below). This connector is included in the scope of delivery. The supply lines are connected to this connector.

Power Supply Connector

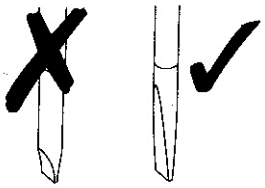
Pin assignment of power supply connector:

Power Supply Connector			
View: Connector X10 by Weidmüller	Pin	Signal	Comment
	**1**	DC 24 V	Supply voltage: DC 24 V (10 to 30 V) Current consumption (typically): 800 mA at DC 24 V
	2	CASE	Casing potential
	3	0 V	Ground for DC 24 V

Required Tools/Parts

In order to connect the voltage supply the following parts/tools are required:

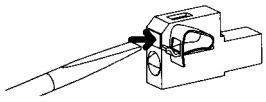
- Power supply connector X10
- Power supply line with a minimum core cross section of 0.75 mm²
- Small flat-bladed screwdriver 0.6 x 3.5 (to DIN 5264-A)

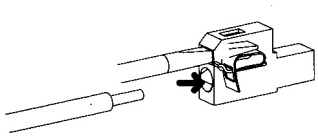
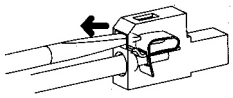


SD 0.6 x 3.5 (DIN 5264-A)

Connecting the Voltage Supply

In order to connect the voltage supply to a JetView take the following steps:

Step	Action
1	Strip the ends of the supply lines. Stripping length: 7 mm max.
2	Open a terminal of the power supply connector X10 by inserting the screwdriver into the upper connector opening. 

Step	Action
3	Insert a single stripped wire into the opened terminal. 
4	Remove the screwdriver. 
5	Once you have inserted all power supply lines, plug the power supply connector into socket X10 on the JetView.

Related Topics:

- **Ethernet Connection** on page 31
- **Serial Connection** on page 32

4.3 Connection with the Controller and PC

Introduction

This chapter contains information on how the JetView is connected to a controller or a PC.

Contents

This chapter contains the following topics:

Topic	Page
Ethernet Connection	31
Serial Connection	32

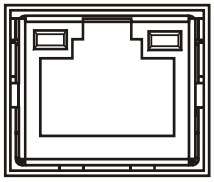
Ethernet Connection

Introduction

This chapter describes how the cable is connected in order to establish an Ethernet connection between a JetView 200/300 and a controller or a PC.

RJ45 Ethernet Jack

Pin assignment of the RJ45 jack **X14** of JetView 205/305 and 310:

RJ45 Ethernet Jack			
View: Connector X14 (female)	Pin	Signal	Comment
	**1**	TX+	
	2	TX-	
	3	RX+	
	4		
	5		
	6	RX-	
	7		
	8		

Direct Connection

To directly connect a JetView to a controller or a PC a **crossover cable** is to be used.

Connection via Ethernet Switch

- To connect a JetView to a controller or a PC **via switch** a **straight-through cable** is to be used.
- Some switches/routers feature an automatic crossover function which ensures automatic adjustment to the cable and the connected device. If this is the case, both cable types (straight-through/crossover) can be used.

Related Topics:

- **Serial Connection** on page 32

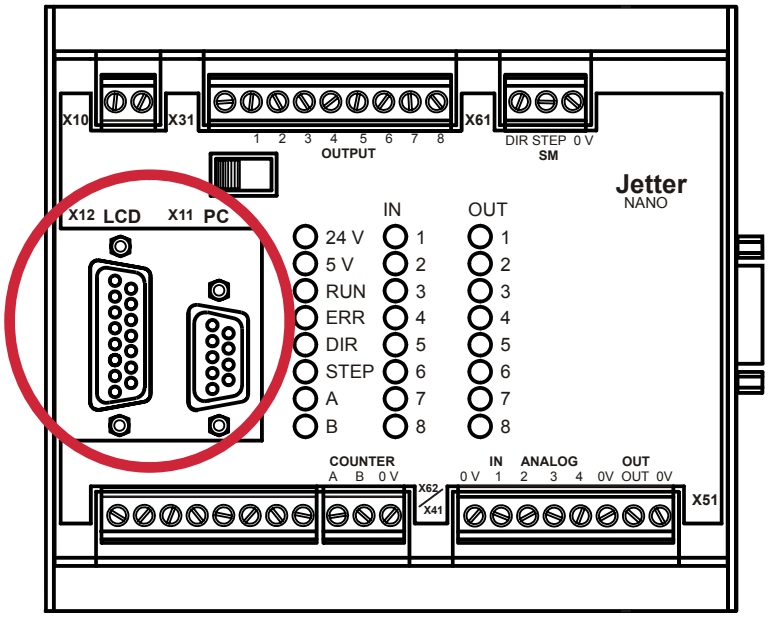
Serial Connection

Introduction

This chapter describes how a serial connection between a JetView 205/305 or 310 and a Jetter controller, for example a NANO-B/C/D, is established.

Serial Interfaces of NANO Controllers

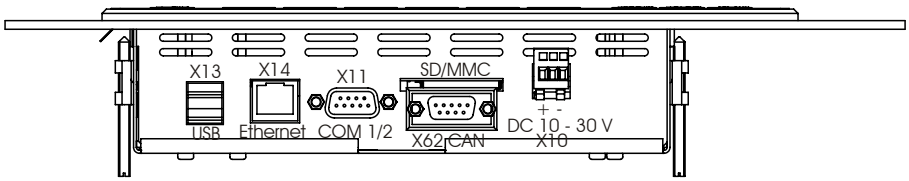
The following illustration shows a NANO-B/C/D controller with its serial interfaces X11 and X12.



Interface	Function
X11 PC	Serial interface for programming the NANO controller.
X12 LCD	Serial interface for connecting HMIs, such as JetView.

JetView Interfaces

The following illustration shows the interfaces of a JetView.



Relevant interfaces:

Interface	Function
X11 COM 1/2	Serial interface COM1 and COM2
X14 Ethernet	Ethernet interface

Serial Connection when using Embedded Runtime

Establishing a serial connection between a JetView and a NANO controller when a visualization based on **Embedded Runtime** is used.

- Connect the NANO (LCD interface X12) to the JetView (COM1 X11) using the cable **NANO to JV-2xx/JV-3xx - Item # 60869947**.

To be able to **program** the NANO controller by means of JetSym a serial programming cable is needed. This cable is plugged into PC interface X11 on the NANO controller. In order to transfer a **visualization project** from JetViewSoft to a JetView an Ethernet connection is required.

Serial Connection when using Browser Visualization

Establishing a serial connection between a JetView and a NANO controller when a **browser-based** visualization is used.

The following items are needed:

- Y-Com cable - Item # 60864146
- NANO to JV-2xx/JV-3xx cable - Item # 60869947 (3 m)
- Serial programming cable - Item # 60328900 (5 m)

Step	Action
1	Connect the single-ended 9-pin SUB-D connector (female) of the **Y-COM cable** to the serial port X11 of the JetView.
2	Connect the NANO controller (PC port X11) to the SUB-D connector RS485 of the Y-COM cable via **serial programming cable**.
3	Connect the NANO controller (LCD port X12) to the SUB-D connector RS232 of the Y-COM cable via **NANO to JV-2xx/JV-3xx cable**.

Related Topics

- **Establishing an Ethernet Connection** on page 31

4.4 Removable Media and Input Devices

Introduction

This chapter contains information on how SD/MMC cards, USB sticks and input devices are connected to a JetView.

Contents

This chapter contains the following topics:

Topic	Page
Connecting MMC or SD cards	35
Connecting an USB Memory Stick	36
Connecting Input Devices	37

Connecting MMC or SD cards

Introduction

Each JetView is equipped with a memory card reader which can read data from, or write to MMC and SD cards. This topic describes how removable media are to be connected. Furthermore, it contains information on read or write access to such media. Memory cards can, for instance, be used to store an image of the JetView file system or to restore an image from a card.

Approved manufacturers

The following manufacturers have been approved:

SanDisk, TakeMS and Transcend

Cards provided by Jetter AG

The following cards can be purchased from Jetter AG:

Designation	Article #
Transcend 64 MB MMC	60866767
Transcend 256 MB MMC	60867023
Transcend 128 MB SD	60869385

Guarantee

Jetter AG is not in a position to guarantee that all makes of MMC and SD can be read by the card reader. The manufacturers of memory cards often make changes to their chips so that the reader sometimes refuses to accept certain cards.

A special hint: Purchase cards tested and approved by Jetter AG.

Necessary Preparations

The memory cards must be FAT formatted.

Reading and Writing Data

Insert the memory card into the reader to read data from the card or to write data to it:

Step	Action
1	Insert the memory card into the card reader slot **X62**. **If ...** / **Then ...** the JetView with its display points **upwards** → insert the card with the **contacts pointing upwards** into the card read until it engages audibly.
2	Open the Windows Explorer via **Start/Programs** or press the **Windows key + E** on a connected keyboard.
3	Open the card by clicking the Hard Disk icon.

Result: Now, you have read or write access to the memory card using the methods usually applied under Windows.

Related Topics

- Also refer to **Connecting an USB Stick** on page 36

Connecting an USB Memory Stick

Introduction

Each JetView is able to accept USB sticks.

Prerequisites

The USB stick must be **FAT** formatted and be compatible with USB 1.0 and 1.1.

Guarantee

Jetter AG is not in a position to guarantee that all makes of USB stick will be accepted.

USB Sticks: Read/Write Access

Insert the USB stick into the port to read data from the stick or to write data to it:

Step	Action
1	Insert the USB stick into the USB port **X13** on the JetView.
2	Open the Windows Explorer via **Start/Programs** or press the **Windows key + E** on a connected keyboard.
3	Open the USB stick by clicking the Hard Disk icon.

Result: Now, you have read or write access to the USB stick using the methods usually applied under Windows.

Related Topics

- **Connecting MMC or SD cards** on page 35
- **Connecting Input Devices** on page 37

Connecting Input Devices

Introduction

The JetView is equipped with two USB ports **X13** where an external USB keyboard and a mouse can be connected.

Approved Keyboard

The USB keyboard by CHERRY (item # G84-4100LCMDE-0 / 02) has been tested successfully.

Related Topics

- **Connecting an USB Stick** on page 36
- **Connecting MMC or SD cards** on page 35

5 Operating a JetView

Introduction

This chapter contains information on control keys and their function, as well as on how the various JetView models are operated.

Contents

This chapter contains the following topics:

Topic	Page
JetView 205/305 with Keyboard, Type TA/Digipot/Touch	40
JetView 205/305 with Keyboard of Type ZB	42
JetView 205/305 ZB - Entering Values	45
JetView 310/305 with Keyboard, Type TA	47

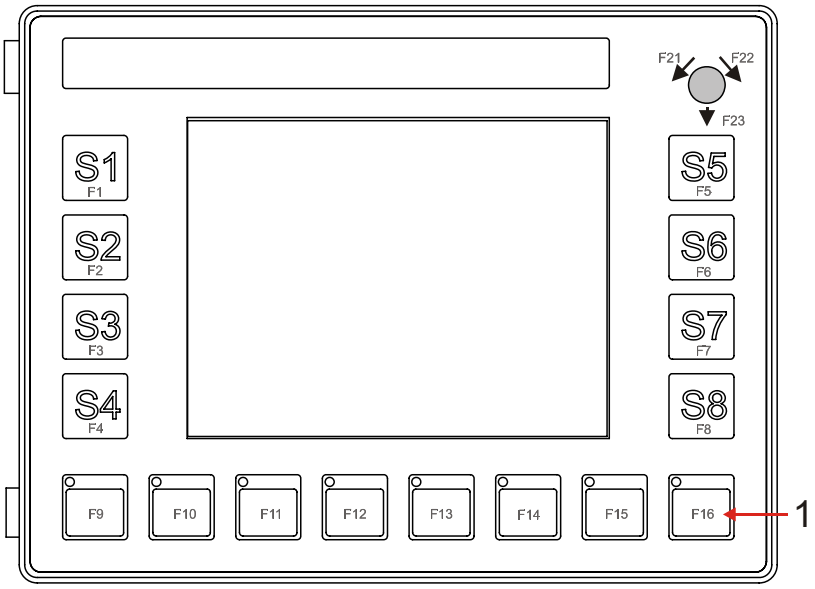
JetView 205/305 with Keyboard, Type TA/Digipot/Touch

Introduction

Depending on the model, the keys of a JetView allow various data to be input. The TA keys of a JetView 205/305 are designed as function keys.

JetView 205/305 with Keyboard TA and Digipot

The following illustration shows a JetView equipped with TA keys and digipot.



Assignment Table: Function Keys vs. Key Codes

Each TA key is factory-assigned and relates to a function key (F1 through F16). The key code of a key plays an important role for browser visualization.

The table below lists the keys and their corresponding key codes:

Key	Key Code
S1(F1)	112
S2(F2)	113
S3(F3)	114
S4(F4)	115
S5(F5)	116
S6(F6)	117
S7(F7)	118
S8(F8)	119
F9	120
F10	121
F11	122
F12	123
F13	124
F14	125
F15	126

Key	Key Code
F16	127

Using Keys and Digipot

These keys can be selected in an embedded runtime project to trigger an event. The digipot can be used in an embedded runtime project for data input or within the **Device Manager** on page 50.

Related Topics

- **JetView 205/305 with numeric keypad** on page 42
- **JetView 310/305 with Keyboard, Type TA** on page 47

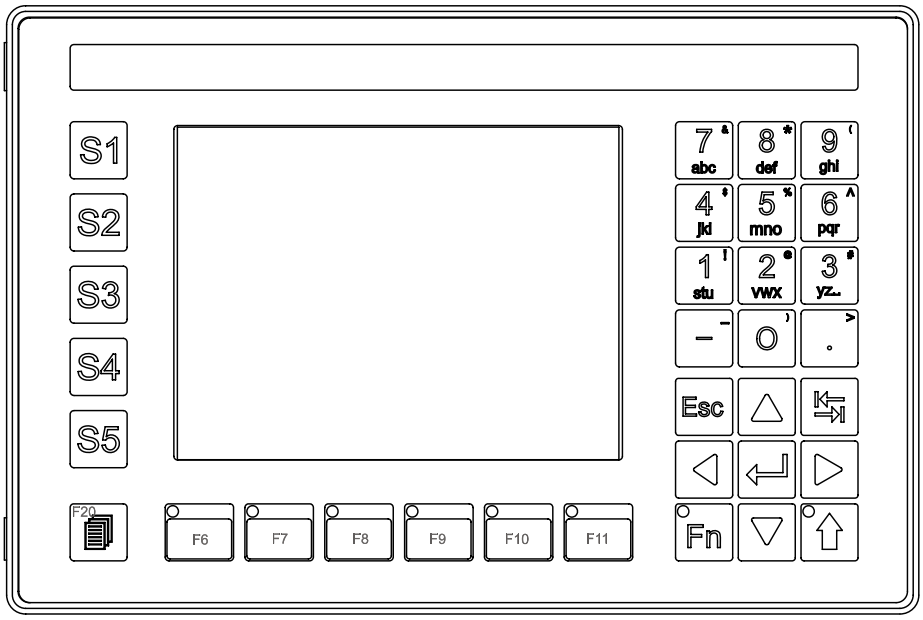
JetView 205/305 with Keyboard of Type ZB

Introduction

Depending on the model, the keys of a JetView allow various data to be input. TA keys are factory-assigned as function keys (here F1 through F11, and F20). The numeric keypad replaces a complete keyboard and is, therefore, for entering characters and numbers.

JetView 205/305 with Numeric Keypad (ZB)

The following illustration shows a JetView equipped with function keys and numeric keypad.



Assignment Table: Keys vs. Key Codes

The tables below list the keys and their corresponding key codes:

Function Keys	Key Code
S1(F1)	112
S2(F2)	113
S3(F3)	114
S4(F4)	115
S5(F5)	116
F6	117
F7	118
F8	119
F9	120
F10	121
F11	122
F20	131

Other Keys		Key Code
1		49
2		50
3		51
4		52
5		53
6		54
7		55
8		56
9		57
0		48
-	Minus	189
.	Point	128
Esc		27
▲	Arrow up	38
⇥	Tabulator	9
◀	Arrow left	37
↵	Enter	13
▶	Arrow right	39
Fn	Function key	
▼	Arrow down	40
A		65
B		66
C		67
D		68
E		69
F		70
G		71
H		72
I		73
J		74
K		75
L		76
M		77
N		78
O		79
P		80
Q		81

Other Keys	Key Code
R	82
S	83
T	84
U	85
V	86
W	87
X	88
Y	89
Z	90

Using Function Keys and Digipot

These keys can be selected in an embedded runtime project to trigger an event. The digipot can be used in an embedded runtime project for data input or within the **Device Manager** on page 50.

Related Topics

- **Entering Values via Numeric Keypad** on page 45
- **JetView 205/305 with Keyboard TA and Digipot** on page 40
- **JetView 310/305 with Keyboard, Type TA** on page 47

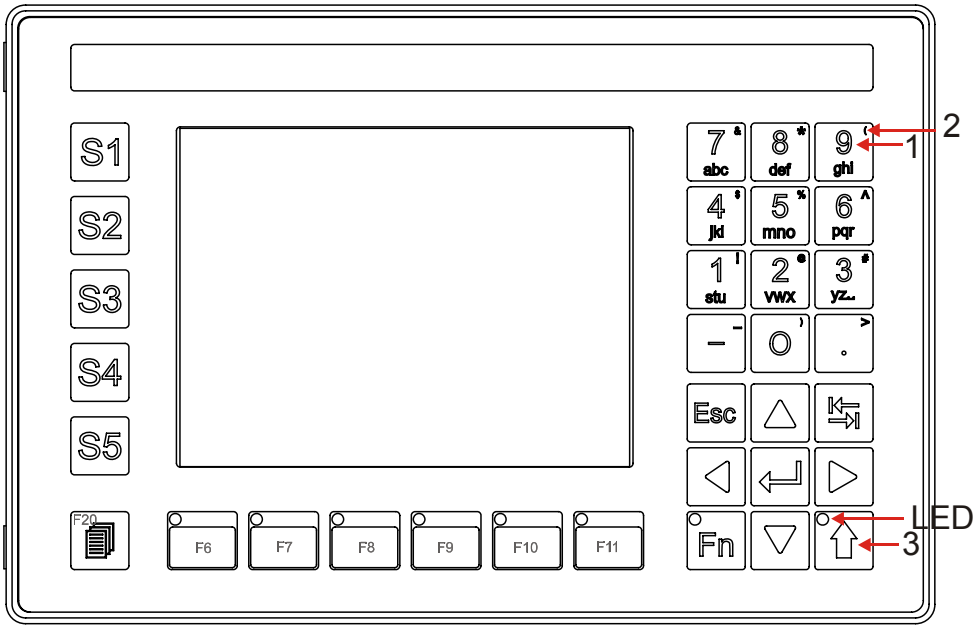
JetView 205/305 ZB - Entering Values

Introduction

The keys of a JetView with numeric keypad have multiple functions which is common practice for computer keyboards. The keys **Shift** and **Fn** are used to select the various characters assigned to a key.

JetView Keys

The following illustration shows the JetView keys which may have several functions (**1** and **2**), as well as the **Shift** key (**3**).



Directly Entering Values

To enter the large characters (1) shown on the keys just press the corresponding key.

Entering Other Characters Using the "Shift" Key

To enter the special characters shown in the upper right corner of the keys (2) take the following actions:

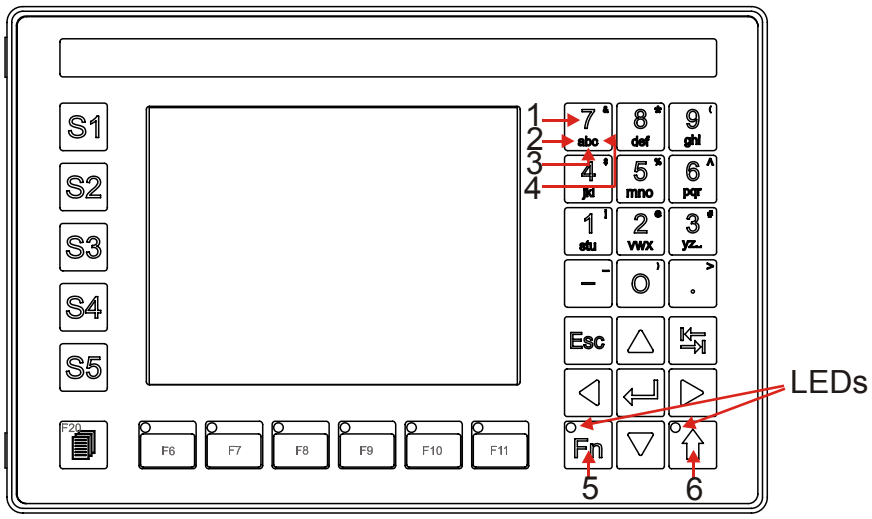
Step	Action
1	Press the "Shift" key. **Result:** LED (3) on the **Shift** key is lit and the **Shift** key is enabled.
2	Press the key which shows the desired character.

Disabling the "Shift" Key

To disable the **Shift** key just press it once again.

Entering Letters

The following illustration shows the JetView keys, as well as the keys **Shift** and **Fn** which are required for entering letters.



Entering Lower Case Letters Using the "Fn" Key

To enter the lower case letters (2 - 4) shown in the bottom portion of the keys take the following actions:

Step	Action
1	Press the **Fn** key (5). **Result:** LED on the **Fn** key is lit which indicates that the **Fn** key is enabled.
2	Press the key which shows the desired letter.

If ...	Then ...
the letter is located on a key in the first place	press the key once.
the letter is located on a key in the second place	press the key twice without break.
the letter is located on a key in the third place	press the key three times without break.

Disabling the "Fn" Key

To disable the **Fn** key just press it once again.

Entering Upper Case Letters Using the "Fn" and "Shift" Keys

To enter upper case letters the keys **Fn (5)** and **Shift (4)** have to be enabled. Upper case letters are then entered the same way as lower case letters.

Disabling the "Fn" "Shift" Keys

To disable the**Fn** and **Shift** keys just press them once again.

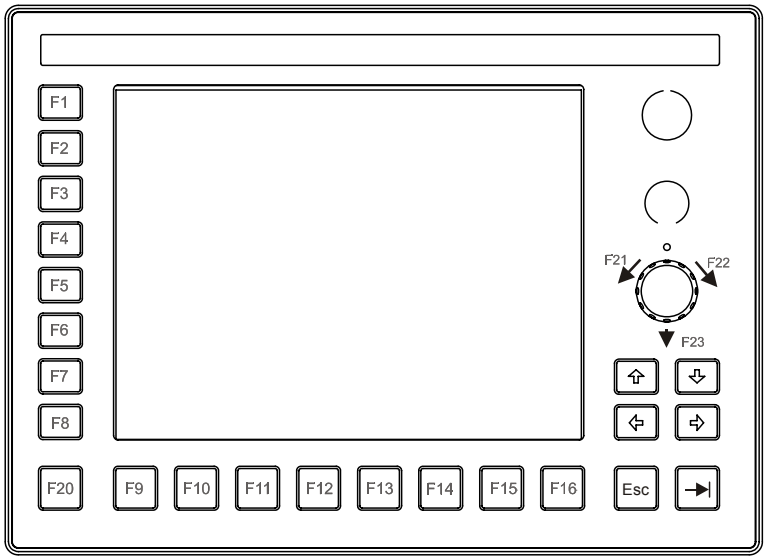
JetView 310/305 with Keyboard, Type TA

Introduction

Depending on the model, the keys of a JetView allow various data to be input. The keys to the left of and below the display of a JetView 310 are designed as function keys. To the right of the display there is the digipot and 6 more keys.

JetView 310 with Keyboard TA and Digipot

The following illustration shows a JetView with its keys and a digipot.



Assignment Table: Keys vs. Key Codes

The table below lists the keys and their corresponding key codes:

Key	Key Code
F1	112
F2	113
F3	114
F4	115
F5	116
F6	117
F7	118
F8	119
F9	120
F10	121
F11	122
F12	123
F13	124
F14	125
F15	126

Key		Key Code
F16		127
F20		131
Esc		27
→|	Tabulator	9
◀	Arrow left	37
▲	Arrow up	38
▶	Arrow right	39
▼	Arrow down	40

Using Keys and Digipot

These keys can be selected in an embedded runtime project to trigger an event. The digipot can be used in an embedded runtime project for data input or within the **Device Manager** on page 50.

Related Topics

- **JetView 205/305 with numeric keypad** on page 42
- **JetView 205/305 with Keyboard TA and Digipot** on page 40

6 Configuration

Introduction

This chapter describes how to configure JetView using Device Manager, as well as under Windows CE.

Contents

This chapter contains the following topics:

Topic	Page
Device Manager	50
Control Panel Settings	71

6.1 Device Manager

Introduction

This chapter describes the functions of Device Manager and how to use it. The Device Manager allows convenient configuration of JetView.

Contents

This chapter contains the following topics:

Topic	Page
Device Manager GUI	51
Operating the Device Manager	52
Device Manager - Menu "Info"	55
Device Manager: "Save/Restore" Menu	57
Device Manager: "Display" Menu	59
Device Manager: "TCP/IP" Menu	60
Device Manager: "Date/Time" Menu	61
Device Manager: Menu "Password"	63
Device Manager: Menu "Startup"	64
Device Manager: Menu "LEDs"	65
Device Manager: Menu "Keys"	67
Device Manager: Menu options	68
Device Manager: "Rotary Encoder" Menu	69

Device Manager GUI

Introduction

Device Manager is a user interface for software configuration. It allows the user to make key settings for using a JetView device. In addition, it shows the user key information on JetView software and hardware. Modifications which have been made to the system can be stored to a configuration file. This file can be imported into other devices, for example for configuration purposes.

Starting Device Manager

Press S1 on JetView or launch Device Manager by clicking the following icon .

Device Manager: User Interface

The following figure shows the structure of Device Manager:

Device Manager: Homepage Areas

The homepage of Device Manager consists of the following areas:

Number	Element	Function
1	Icons	By clicking an icon the corresponding menu is opened for configuration.
2	"Save" or "Cancel" buttons	The button **Save/Reboot** can be used to save the settings made and to carry out a reboot if required. When clicking the **Cancel** button any changes will be discarded and the Device Manager will be exited.

Operating the Device Manager

Introduction

Depending on the JetView model, the device manager can be operated in different ways.

Prerequisites

The easiest way to operate the device manager is using an external USB mouse and keyboard. Depending on the model, a touch screen, digipot or numeric keypad can be used as well.

Selecting Buttons on the Main Page

To select the buttons **Save/Reboot** and **Cancel** on the main page proceed as follows:

If ...	Then ...
An external keyboard or mouse is used	Select the button as is the rule for Windows.
A touch screen is used	Just touch the button
A digipot is used	■ Turn the digipot until the button is highlighted. ■ Press the digipot.
The numeric keypad of JetView/an external keyboard is used	■ Press the *Tab* key several times until the corresponding button is highlighted. ■ Press "Enter".

Selecting Icons

To select icons for opening a menu, which are located on the main page, proceed as follows:

If ...	Then ...
An external keyboard or mouse is used	Select the icon as is the rule for Windows.
A touch screen is used	Just touch the icon twice (like a double-click)
A digipot is used	■ Turn the digipot until the icon is highlighted. ■ Press the digipot to get to the icons level. ■ Turn the digipot and select the desired icon. ■ Press the digipot again.
The numeric keypad of JetView/an external keyboard is used	■ Press the *Tab* key several times until the corresponding button is highlighted. ■ Press "Enter".

Selecting a Menu via Touch Screen

To select a menu item using the touch screen proceed as follows:

Control	Operation
Button	Touch the button to select it.
Radio Button	Touch the button to select it.
Check Box	Touch the check box to select it.
Text Box	Touch the text box to select it. To enter or change values an external keyboard or numeric keypad is required.
Combo Box	■ Touch the arrow to expand the combo box. ■ Touch the desired entry.
UP/Down Box	Touch the up/down arrow to change the value.
Slider	Touch the slider and move it.

Selecting a Menu via Digipot

To select a menu item using the digipot proceed as follows:

Control	Operation
Button	■ Turn the digipot until the desired button is highlighted. ■ Press the digipot.
Radio Button	■ Turn the digipot until the desired radio button is highlighted. ■ Press the digipot and then turn it.
Check Box	■ Turn the digipot until the desired check box is highlighted. ■ Press the digipot.
Text Box	■ Turn the digipot until the desired text box is highlighted. ■ Press the digipot.
Combo Box	■ Turn the digipot until the desired combo box is highlighted. ■ Press the digipot. ■ Turn the digipot and select the desired entry.
UP/Down Box	■ Turn the digipot until the desired up/down box is highlighted. ■ Press the digipot. ■ Turn the digipot.
Slider	■ Turn the digipot until the desired slider is highlighted. ■ Press the digipot. ■ Turn the digipot.

If ...	Then ...
the color of the text box changes after the digipot has been pressed	the value in the text box can be changed by turning the digipot.
the color of the text box does not change after the digipot has been pressed	the value in the text box can only be changed via external keyboard or numeric keypad.

Selecting a Menu via External Keyboard/Numeric Keypad

To select menu items using the keyboard proceed as follows:

Control	Operation
Button	■ Press the tab key until the desired button is highlighted. ■ Press "Enter".
Radio Button	■ Press the tab key until one the buttons is highlighted. ■ Press the corresponding arrow key.
Check Box	■ Press the tab key until the desired check box is highlighted. ■ Press the key "-" or "+".
Text Box	■ Press the tab key until the desired text box is highlighted. ■ Enter the new value.
Combo Box	■ Press the tab key until the desired combo box is highlighted. ■ Press "Enter". ■ Select the desired entry using the arrow keys.
UP/Down Box	■ Press the tab key until the desired up/down box is highlighted. ■ Enter the new value or change it using the up/down arrows.
Slider	■ Press the tab key until the desired slider is highlighted. ■ Press the corresponding arrow key.

Selecting a Menu Item via External Keyboard/Numeric Keypad

With keyboard and mouse connected, menu items are selected using the methods usually applied under Windows.

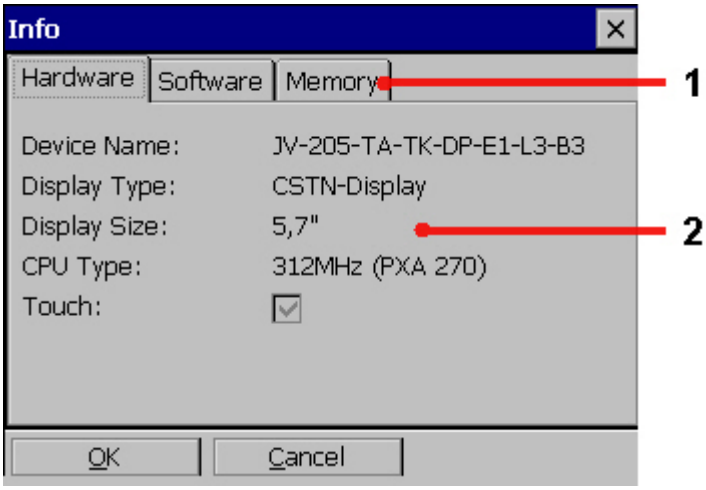
Device Manager - Menu "Info"

Introduction

The menu "Info" is for displaying all relevant JetView system information. The info pane has 3 tabs. These tabs show the following information: First tab - JetView hardware; second tab - software; third tab - memory. This pane is for displaying information only. Settings cannot be made here.

Tab "Hardware"

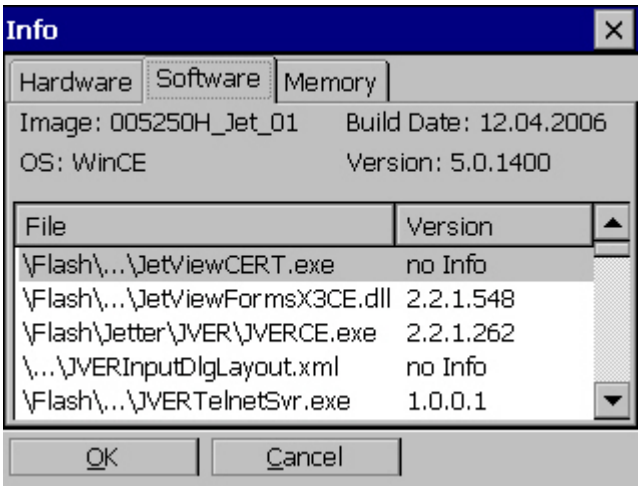
This tab is for displaying JetView hardware information.



Number	Element
1	Tab
2	Pane

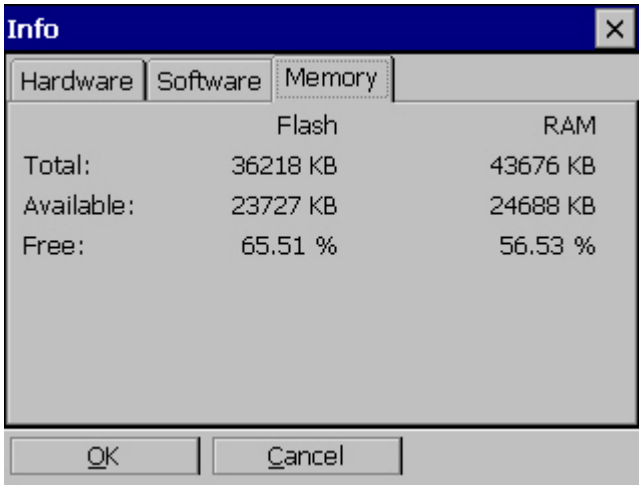
Tab "Software"

This tab is for displaying information on software installed on the JetView.



Tab "Memory"

This tab is for displaying information on installed/available memory on the JetView.



Selecting Tabs

The method for selecting individual tabs depends on the JetView model and input devices used.

If ...	Then ...
An external keyboard and mouse is used	Use the mouse to click on the desired tab "Hardware", "Software" or "Memory".
A touch screen is used	Touch the corresponding tab on the screen to open the desired pane.
A digipot is used	Turn the digipot until the info pane is highlighted.Press the digipot to reach the tab level. Here you may switch between the different tabs (if for 3 seconds no action is taken, the JetView returns to the superordinate level).
The numeric keypad of JetView/an external keyboard is used	Press the *Tab* key several times until the corresponding tab is highlighted. You can navigate to the corresponding tab by using the *arrow keys*.

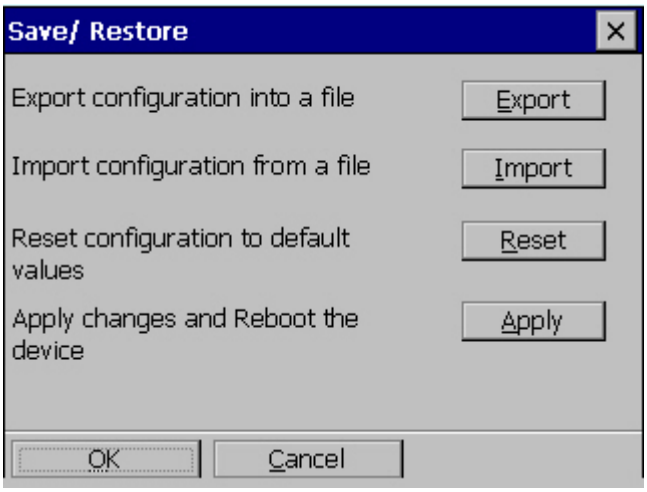
Device Manager: "Save/Restore" Menu

Introduction

This menu allows you to store the device manager settings to a configuration file. By importing this file and the settings stored to it the JetView or other JetViews can be configured. It also allows to restore the JetView configuration to default values.

"Save/Restore" Menu

The following figure shows the structure of the menu "Save/Restore":



Controls of the "Save/Restore" Menu

The menu consists of the following controls:

Element	Function
Export button	This button is for storing the device manager settings to a configuration file.
Import button	This button is for importing an existing configuration file. The settings in the imported file will override all existing settings!
Reset button	This button is for restoring the JetView configuration to default values.
Apply button	This button is for accepting the changes and restarting the JetView.

Using the "Save/Restore" Menu

Depending on the JetView model and input devices connected, the buttons can be selected in different ways.

If ...	Then ...
an external keyboard and mouse is used	select the corresponding button by clicking on it.
a touch screen is used	select the corresponding button by tapping on it.
a digipot is used	turn the digipot until the desired button is highlighted. Press the digipot (if for 3 seconds no action is taken, the JetView returns to the superordinate level).
the numeric keypad of JetView/an external keyboard is used	press the *Tab* key until the desired button is highlighted. Press the "Enter" key.

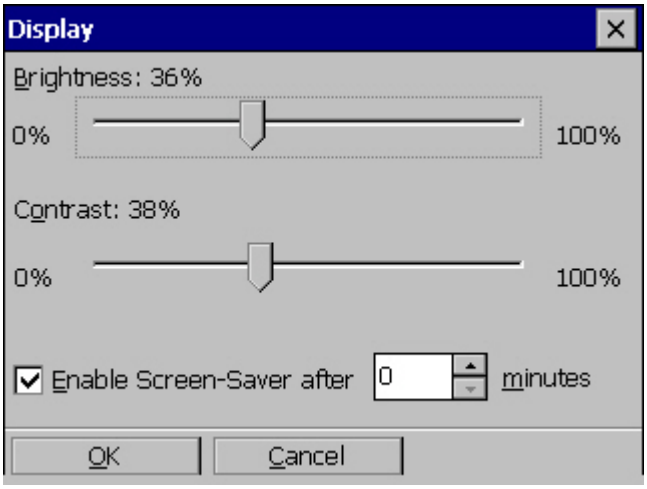
Device Manager: "Display" Menu

Introduction

This menu allows you to adjust brightness and contrast of the JetView display. It also allows a screen saver to be activated after a preset time and the display to be switched off.

"Display" Menu

The following figure shows the structure of the menu "Display":



Controls of the "Display" Menu

The menu consists of the following controls:

Control	Function
Slider **Brightness**	This slider is for setting the brightness of the display.
Slider **Contrast**	This slider is for setting the contrast of the display.
Check box **Screen-Saver**	This check box is for enabling/disabling the screen saver.
List box **minutes**	This control is for setting the time after expiration of which the screen saver will be activated.

Operation

- **Operating a Menu** on page 52

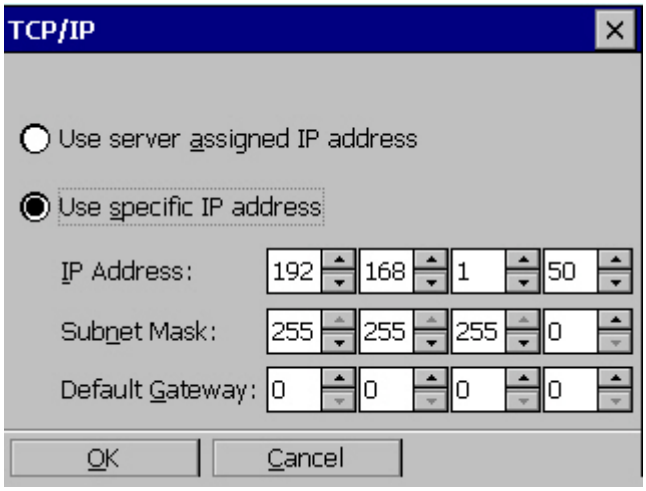
Device Manager: "TCP/IP" Menu

Introduction

This menu is for setting the network connectivity It can be used to set DHCP or a static IP address for the JetView.

"TCP/IP" Menu

The following figure shows the structure of the menu "TCP/IP":



Controls of the "TCP/IP" Menu

The menu consists of the following controls:

Control	Function
Radio button **Use server assigned IP address**	Using DHCP If this radio button has been activated, it is, of course, impossible to set a static IP address.
Radio button **Use specific IP address**	If this radio button has been activated, a static IP address, subnet mask and a default gateway can be set.

Using the "TCP/IP" Menu

- **Operating a Menu** on page 52

Device Manager: "Date/Time" Menu

Introduction

This menu is for setting the realtime clock and date of JetView.

Realtime Clock Operating Time

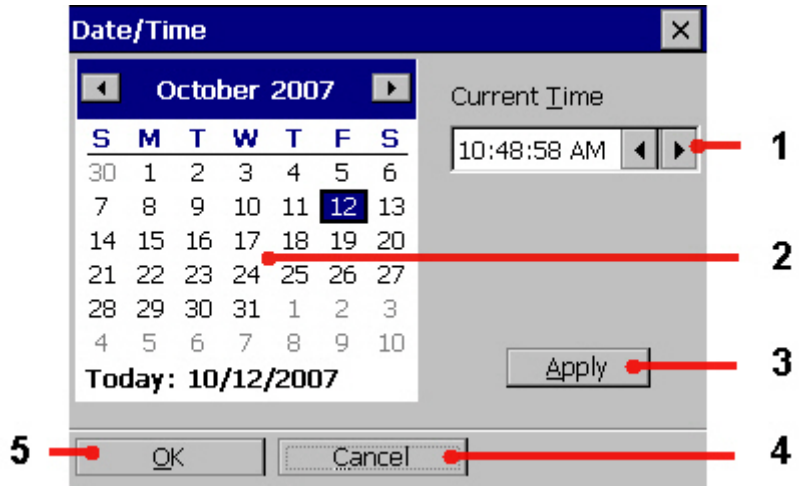
The realtime clock will run as long as the HMI is energized or the GoldCap capacitor is charged. When the power supply is interrupted, RTC settings are cleared and the RTC stops.

Usually, the HMI is equipped with a 1 farad GoldCap capacitor. If the HMI has been connected to the power supply for at least 12 hours, the GoldCap is fully charged and is able to supply the realtime clock for 5 days (without mains supply) at an ambient temperature of 25 °C. Therefore, it is very important to charge the GoldCap for at least 12 hours when the HMI is put into operation.

In case the HMI is disconnected from mains for a period exceeding 5 days, it must be equipped with an optionally available lithium battery.

Menu "Date/Time"

The following figure shows the structure of the menu "Date/Time":



Controls of the Menu "Date/Time"

The menu "Date/Time" consists of the following controls:

Control	Designation	Function
1	Text box **Current Time**	This text box is for setting the current time. This can be done, either using the arrow keys or directly entering the current time.
2	Calendar	Here, the current month and day is set.
3	**Apply** button	Click this button to apply your settings.
4	**Cancel** button	This button is for discarding the changes and exiting the menu.
5	**OK** button	This button is for accepting the changes and exiting the menu.

Operating the Menu "Date/Time"

If ...	Then ...
An external keyboard and mouse is used	Select the button as is the rule for Windows.
A touch screen is used	**Text Box "Time"** Select hours, minutes, seconds or PM/AM by tapping on them. To change a value touch the arrow keys. **Calendar** To display a specific day tap on it. If you wish to go to another month, touch the arrow keys of the calendar.
A digipot is used	**Text Box "Time"** Turn the digipot until the text box "Time" is highlighted. Press the digipot (if for 3 seconds no action is taken, the JetView returns to the superordinate level). Turn the digipot until the desired time is set. **Calendar** Turn the digipot until the calendar is highlighted. Press the digipot. Turn the digipot until the desired date is set.
The numeric keypad of JetView/an external keyboard is used	**Text Box "Time"** Press the *Tab* key several times until the text box "Time" is highlighted. You can navigate to the corresponding places by pressing the arrow keys right/left. To change a value press the arrow keys up/down or enter the value directly. **Calendar** Press the *Tab* key several times until the calendar is highlighted. You can navigate to individual days by pressing the arrow keys right/left. Confirm the changes by pressing the button **Apply**.

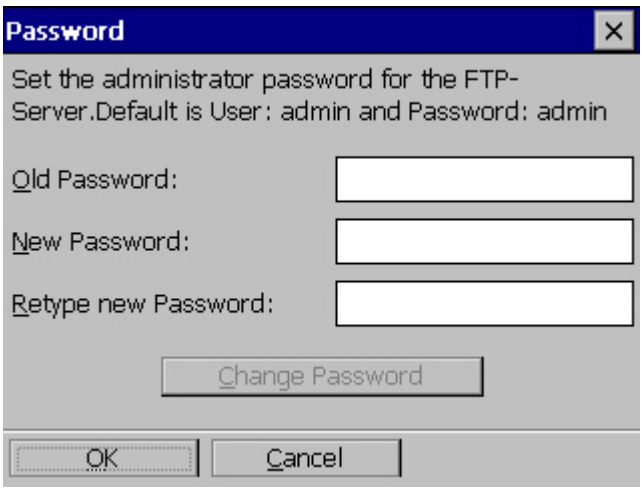
Device Manager: Menu "Password"

Introduction

This menu is for setting an FTP password. This password is required for establishing an FTP connection.

Menu "Password"

The following figure shows the menu "Password".



Controls of the Menu "Password"

This menu consists of the following controls:

Control	Function
Text box **Old Password**	Into this box the existing FTP password must be entered. The default password is **admin**.
Text box **New Password**	Into this box the new password must be entered.
Text box **Retype new Password**	The new password has to be entered into this box to make sure that no typing errors have been made.
Button **Change Password**	This button is active if any entries have been made. If this button is pressed, all entries are applied and a message is displayed.
Button **OK**	This button is for accepting the changes and exiting the menu.
Button **Cancel**	This button is for discarding any changes and exiting the menu.

Prerequisites for Using the Menu "Password"

To enter or change passwords an external keyboard or a JetView with numeric keypad is required!

Operating the Menu "Password"

- **Operating a Menu** on page 52

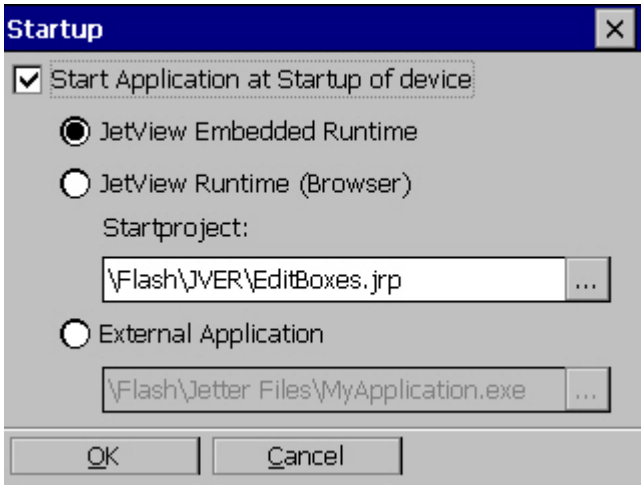
Device Manager: Menu "Startup"

Introduction

This menu is for setting the starting behavior of JetView.

"Startup" Menu

The following figure shows the structure of the menu **Startup**



Controls of the Menu "Startup"

The menu consists of the following controls:

Control	Function
Checkbox **Start Application at Startup of device**	This checkbox is for setting whether an application is to be launched by default once JetView is started.
Radio button **JetView Embedded Runtime**	If this button is activated, Embedded Runtime is launched on startup.
Radio button **JetView Runtime (Browser) Startproject:**	If this button is activated, Runtime is launched on startup.
Radio button **External Application**	If this button is activated, an external application is launched on startup. This application has to be specified beforehand.
Button **OK**	Click this button to apply your settings.
Button **Cancel**	This button is for discarding any changes and exiting the menu without saving.

Operating the Menu "Startup"

- **Operating a Menu** on page 52

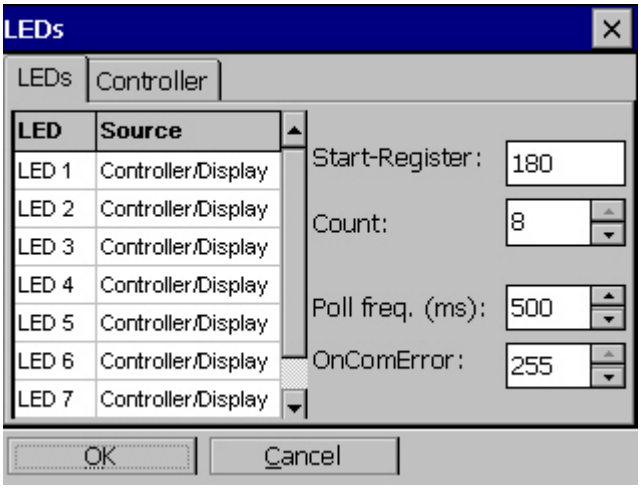
Device Manager: Menu "LEDs"

Introduction

The menu **LEDs** is for setting the LED assignment of JetView.

Tab "LEDs"

This tab is for making LED settings:



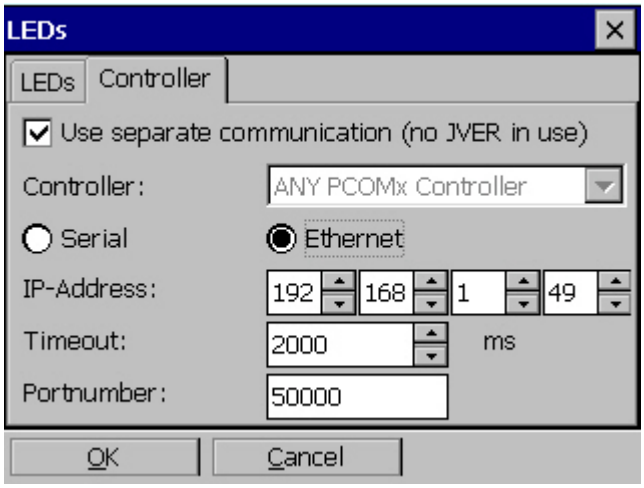
Controls of the tab "LEDs"

The tab "LEDs" features the following controls:

Control	Function
Table **LED/Source**	This table is for selecting an LED and its control mode. LEDs are controlled either by the controller or by JetView.
Text box **Start Register**	Register on the connected controller which is used to control the first LED on the JetView. Further LEDs are controlled by subsequent registers (register 181 for LED2, ...)
UP/Down Box **Count**	This box is for setting the number of LEDs the JetView is equipped with.
UP/Down Box **Poll freq. (ms)**	This box is for setting the scanning rate (in ms) for registers on the controller.
Button **OK**	Click this button to apply your settings.
Button **Cancel**	This button is for discarding any changes and closing the menu.

Tab "Controller"

This tab is for setting the connection to the controller which then controls the LEDs.



Controls of the tab "Controller"

The tab "Controller" features the following controls:

Control	Function
Checkbox **Use separate communication (no JVER in use)**	This checkbox is to be ticked if Embedded Runtime will not be used.
Radio Button **Serial**	This radio button is to be activated if the controller is to be accessed via serial port.
Radio Button **Ethernet**	This radio button is to be activated if the controller is to be accessed via Ethernet.
UP/Down Box **IP Address**	The IP address is to be entered into these boxes.
Button **OK**	Click this button to apply your settings.
Button **Cancel**	This button is for discarding any changes and closing the menu.

Operating the Menu

- **Operating a Menu** on page 52

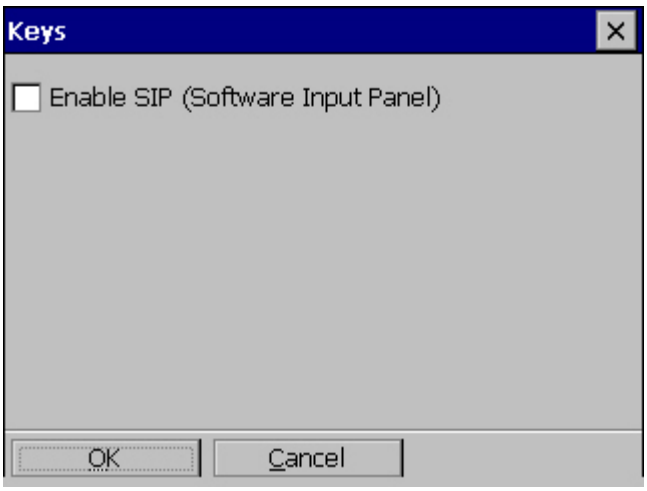
Device Manager: Menu "Keys"

Introduction

This menu is for selecting whether a software keyboard (SIP) is to be activated or not. This software keyboard can then be displayed in Windows.

Menu "Keys"

The following figure shows the structure of the menu "Keys"



Elements of the Menu "Keys"

The menu consists of the following controls:

- Checkbox **Enable SIP** (Software Input Panel)

By ticking this checkbox SIP is activated.

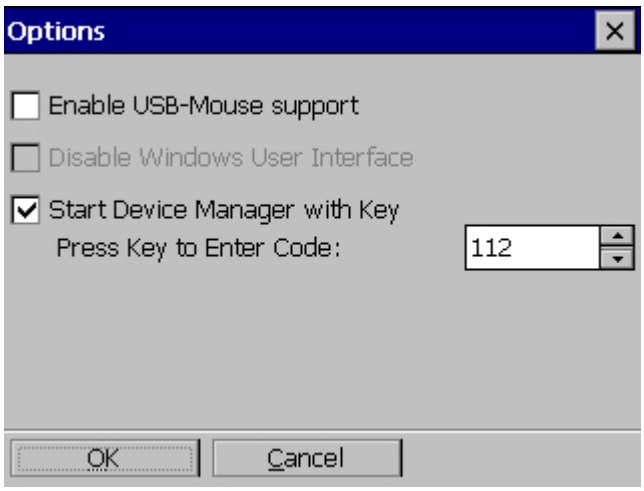
Device Manager: Menu options

Introduction

This menu is for activating/deactivating a connected USB mouse and assigning a key for launching the Device Manager.

"Options" Menu

The following figure shows the structure of the menu **Options**:



Controls

The menu **Options** consists of the following controls:

Element	Function
Checkbox **Enable USB Mouse support**	By ticking this checkbox a connected USB mouse is activated.
Checkbox **Disable Windows User Interface**	This function is disabled at the moment.
Checkbox/UpDownBox **Start Device Manager with Key. Press Key to Enter Code:**	By ticking this checkbox the key with the given key code will be used to launch the Device Manager (112: F1 key).

Operating the Menu

- **Operating a Menu** on page 52

Device Manager: "Rotary Encoder" Menu

Introduction

This menu is for configuring the digipot. The digipot is used to change values. The rate of change can be set in 5 steps. If the digipot is turned slowly, the selected value changes in small increments (low rate). If the digipot is turned fast, the selected value changes in great increments (high rate). This menu is used to set the gradation of the change rate for the digipot.

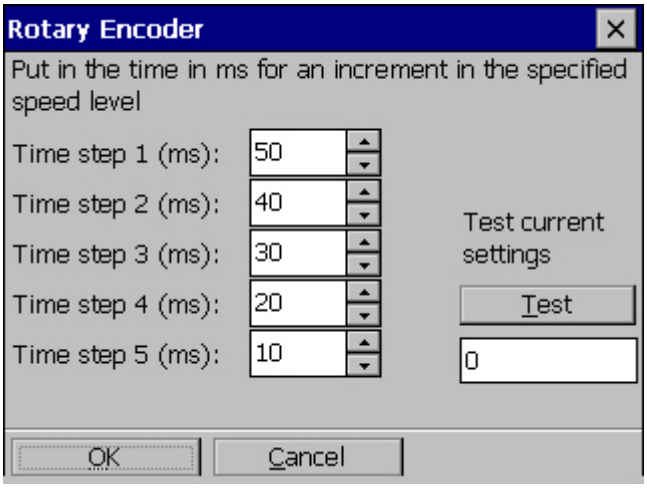
Rules

When configuring the digipot the following rules have to be observed:

- The higher the set value for a step, the faster this step will be reached when turning the digipot.
- The values for individual steps have to be defined in descending order as shown below. The lowest step must have the highest value, etc.

The menu "Rotary Encoder"

The following figure shows the structure of the menu



Controls of the menu "Rotary Encoder"

The menu consists of the following controls:

Control	Function
Up/Down Box **Time step 1**	Digipot change rate 1. This is the lowest change rate.
Up/Down Box **Time step 2**	Digipot change rate 2. The digipot changes values at the next higher change rate.
Up/Down Box **Time step 3**	Digipot change rate 3. The digipot changes values at the next higher change rate.
Up/Down Box **Time step 4**	Digipot change rate 4. The digipot changes values at the next higher change rate.
Up/Down Box **Time step 5**	Digipot change rate 5. This is the highest change rate.
Button **Test**	If the change rate has been altered, this button must be pressed to apply this change. Then, the settings can be tested.

Control	Function
Text box underneath the button **Test**	When testing a setting, a register is incremented/decremented in this box. This way, the user is able to view the effects of the setting depending on the rotational speed of the digipot.
Button **OK**	This button is for applying the changes and closing the menu.
Button **Cancel**	This button is for discarding the changes and closing the menu.

Testing the Digipot

To test the digipot follow the steps below:

Step	Action
1	Press the button **Test** using, for example, the digipot. **Result:** The cursor appears in the text box underneath the button **Test**.
2	Press the key **Enter** or the digipot. **Result:** The text box gets highlighted.
3	Turn the digipot. **Result:** A value is incremented/decremented in this box. This way, the user is able to view the effects of the setting depending on the rotational speed of the digipot. In parallel, a bar graph appears showing the step to which the digipot is set.

Operating the Menu

- **Operating a Menu** on page 52

6.2 Control Panel Settings

Introduction

This chapter describes the main settings to be made in the control panel of Windows CE.

Contents

This chapter contains the following topics:

Topic	Page
Opening the Control Panel	72
Control Panel GUI and Operation	74
Touch Screen Calibration	75

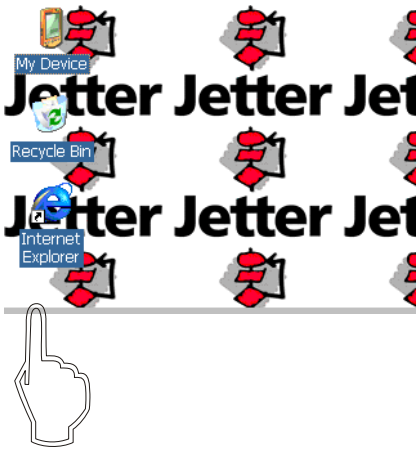
Opening the Control Panel

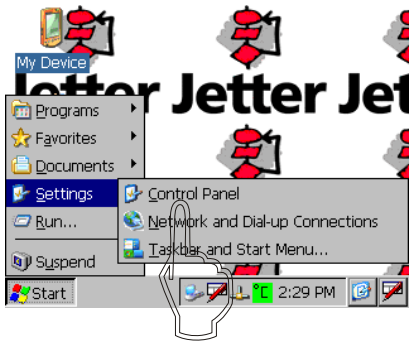
Introduction

This chapter describes how to open the control panel.

Opening the Control Panel

To open the control panel proceed as follows:

Step	Action
1	To unhide the task bar touch the lower end of the display or press the Windows key on the USB keyboard. 
2	Press the button **Start** on your touch screen or using your USB keyboard.

Step	Action
3	Select the menu item **Control Panel**. 

Result: The Control Panel opens.

Related Topics:

- **Control Panel GUI and Operation** on page 74

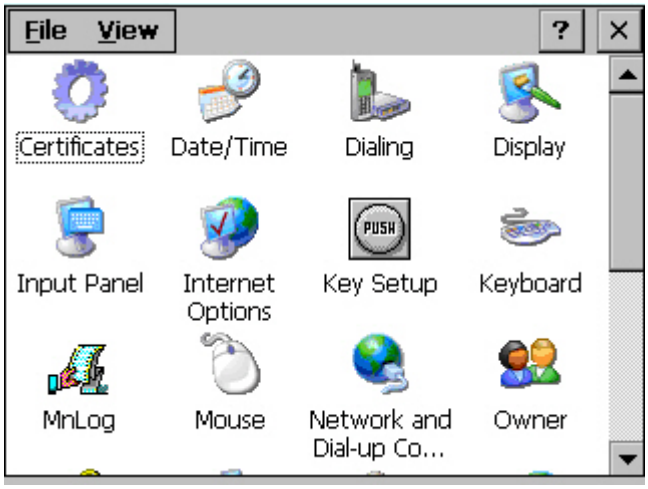
Control Panel GUI and Operation

Introduction

Besides the Device Manager settings, other settings have to be made in Windows CE Control Panel.

Control Panel

The following illustration shows the Control Panel window:



Operating the Control Panel

To select individual menu items proceed as follows:

If ...	Then ...
an external keyboard and mouse is used	open the menu by double-clicking the corresponding icon.
a touch screen is used	open the menu by tapping twice on the corresponding icon on the touch screen.
the numeric keypad of JetView/an external keyboard is used	press the *Tab* key several times until the corresponding icon is highlighted. You can navigate to the corresponding icon by using the *arrow keys*. To open the menu press the *Enter* key.

Touch Screen Calibration

Introduction

If the touch screen ceases to properly react to the pen, it should be recalibrated.

Calibration by the Manufacturer

The touch screen has been pre-calibrated by the manufacturer. In case of errors the touch screen must be recalibrated.

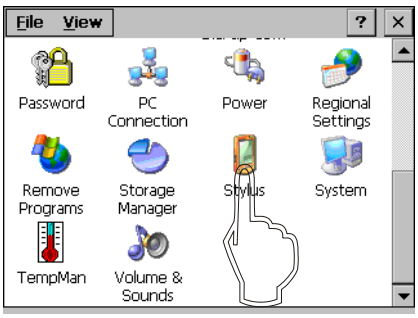
Prerequisites

The button **Recalibrate** in the menu **Stylus** is active only if the HMI has been calibrated before. If the button "Recalibrate" does not exist, you have to connect an external keyboard to the USB port.

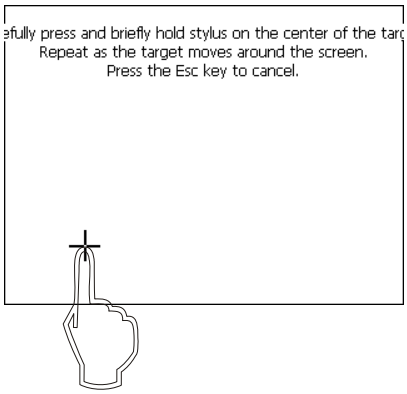
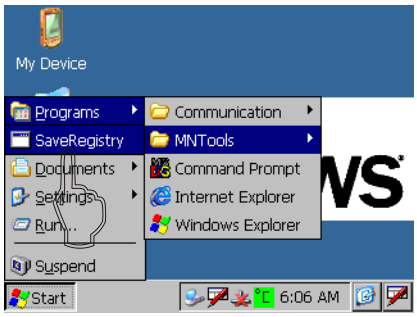
Then press the TAB key to activate Recalibrate.

Touch Screen Calibration

To calibrate the screen complete the following steps:

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1</td><td>
<table>
<tr><th>If ...</th><th>Then ...</th></tr>
<tr><td>an Embedded Runtime application is running on the HMI</td><td>close this application</td></tr>
<tr><td>the control panel has not been opened yet</td><td>open the Control Panel on page 72</td></tr>
</table>
</td></tr>
<tr><td>2</td><td>Open the menu Stylus, for example, by double-clicking the corresponding icon with an external mouse.
 

Result: The menu opens.</td></tr>
<tr><td>3</td><td>Select the tab Calibration.</td></tr>
</table>

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>4</td><td>Press the button Recalibrate.
</td></tr>
<tr><td>5</td><td>Press with the tip of your pen into the center of the crosses which are displayed one after the other.
 
</td></tr>
<tr><td>6</td><td><table>
<tr><th>If ...</th><th>Then ...</th></tr>
<tr><td>you want to accept the calibration results</td><td>press the Enter key.</td></tr>
<tr><td>you want to discard the calibration results</td><td>press the Escape key.</td></tr>
</table></td></tr>
<tr><td>7</td><td>Run SaveRegistry via Start/Programs/MNTools/.
 
</td></tr>
<tr><td>8</td><td>Restart the JetView.</td></tr>
</table>

7 Establishing a Connection between JetViewSoft and JetView

Introduction

This chapter describes the settings which have to be made in JetViewSoft in order to transfer visualization projects to a JetView.

Contents

This chapter contains the following topics:

Topic	Page
Configuring an FTP connection in JetViewSoft	78

Configuring an FTP connection in JetViewSoft

Introduction

This chapter describes how an FTP connection between PC and JetView is configured. Such a connection is required to transfer a visualization project from JetViewSoft to JetView.

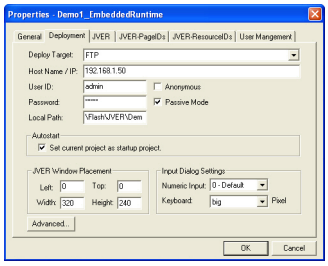
Prerequisites

The following requirements must be met:

- PC with JetViewSoft installation
- **Ethernet connection** on page 31 between PC and JetView

Configuration

Configure your FTP connection between PC and JetView in the following way:

Step	Action
1	Open JetViewSoft.
2	<table><tr><th>If ...</th><th>Then ...</th></tr><tr><td>You have already created a visualization project</td><td>proceed with step 3.</td></tr><tr><td>You have not yet created a visualization project</td><td>create a new project via **File**/**New**.</td></tr></table>
3	Open menu item **Properties** and go to tab **Deployment**.
4	Accept the existing settings except for the **IP address** which must be adjusted. As password enter **admin**. 
5	Confirm your settings by clicking **OK**.

Result: Now the FTP connection has been established and project files can be transferred to JetView.

8 Creating and Restoring a JetView Image

Introduction

This chapter describes how an image is created and restored.

Contents

This chapter contains the following topics:

Topic	Page
Creating an Image	80
Restoring an Image	81

Creating an Image

Introduction

A memory card is used to store an image of the JetView file system.

Prerequisites

A FAT formatted SD or MMC memory card with at least 64 MB which contains all the files for creating an image. This file set can be downloaded from the Jetter **Homepage** http://www.jetter.de. For each JetView model there is a compatible file set.

Creating an Image

To create an image proceed as follows:

Step	Action
1	Insert the FAT formatted memory card containing the file set into the card slot on the JetView.
2	Re-boot JetView. **Result:** The image is created. Then the JetView will be re-booted automatically.
3	Once JetView has been re-booted, remove the memory card from the slot.

Result: The JetView image is now stored to the memory card. The memory card can now be used to restore this image to a JetView.

Related Topics:

- **Restoring an Image** on page 81

Restoring an Image

Introduction

The process of restoring an image will run automatically.

Prerequisites

To restore an image a memory card containing this image is needed. The bootable memory card and the image have to be created first.

Restoring an Image

Take the following steps to restore an image:

Step	Action
1	Insert the memory card containing the image into the card slot on the JetView. **Attention: All data and settings on the JetView will be deleted!**
2	Restart the JetView. **Result:** The image file will automatically be restored to the JetView. Then the JetView will be restarted.

Result: The image has been restored.

Related Topics:

- **Creating an Image** on page 80

Appendix

Introduction

This appendix describes the updates between the latest and the present revision. Further, it contains electrical and mechanical data, as well as operating data.

Contents

This appendix contains the following topics:

Topic	Page
Recent Revisions	83
Technical Data	84

A: Recent Revisions

Revisions

The following changes have been made to revision 3.00 of this manual.

Chapter	Comment	Revised	Added	Deleted
Whole manual	Revised to Info Mapping principles	✓		
Device Manager			✓	

B: Technical Data

Introduction

This chapter contains information on technical data and operating conditions.

Contents

This chapter contains the following topics:

Topic	Page
Technical Data	85
Operating Parameters	87

Technical Data

General and Mechanical Specifications

General and Mechanical Specifications			
Parameter	JV-205/305-TA	JV-205/305-ZB	JV-310-TA
Height	160 mm		250 mm
Width	210 mm		325 mm
Depth	48 mm		67 mm
Mounting	4 clamps with screws		10 bolts M4
Weight	1 kg		2.45 kg
Screen Size	115 x 86 mm 130 mm (diagonal)		210 x 160 mm 260 mm (diagonal)
LEDs	8 LEDs (amber)		
Keys	16 membrane keys Option: "DigiPot" (rotary encoder)	33 membrane keys	23 membrane keys Option: "DigiPot" (rotary encoder)
Front panel	0.15 mm polyester surface on a 4.85 mm AlMg3 panel		

Electrical Specifications

Electrical Specifications			
Parameter	JV-205/305-TA	JV-205/305-ZB	JV-310-TA
Power Supply	DC 24 V (10 V ... 30 V) with 3-pin "Zec" connector by Phoenix See „Notice!“		
Power Consumption	Typically 800 mA at 24 V and 25 °C ambient temperature		
Display	JV-205: 5.7“ CSTN (passive) JV-305: 5.7“ TFT (active)		10.4“ TFT (active)
Display resolution	320 x 240 pixels (1/4 VGA)		640 x 480 pixels (VGA)
Type of display	LANDSCAPE		
Processor	Xscale PXA270 32-bit Risk		
CPU clock rate	312 MHz (option: 624 MHz)		624 MHz

Electrical Specifications	
Memory	64 MB SDRAM 64 MB Flash Alternative memory: Multi Media Card MMC or SD memory card from 8 MB to 512 MB
Interfaces	9-pin male SUB-D connector: RS-232 and RS-422 2 x USB Host Ethernet 10/100BASE-TX, RJ45 Socket for CAN or other fieldbus submodules
Operating System	Windows CE 5.0

Operating Parameters

Environment

Operating Parameters - Environmental Data		
Parameter	Value	Reference
Operating Temperature Range	0 °C through +50 °C	
Storage Temperature Range	-10 °C (max. 48 h) up to +60 °C (max. 168 h)	DIN EN 60068-2-1 DIN EN 60068-2-2
Air Humidity / Humidity Rating	5 % to 90 %, non-condensing	
Pollution Degree	II	DIN EN 61131-2
Corrosion Immunity/Chemical Resistance	No special protection against corrosion. Ambient air must be free from higher concentrations of acids, alkaline solutions, corrosive agents, salts, metal vapors, or other corrosive or electroconductive contaminants	
Operating Altitude	Max. 2,000 m above sea level	DIN EN 61131-2

Mechanical Parts

Operating Parameters - Mechanical Data		
Parameter	Value	Reference
Free Falls Withstanding Test	Height of fall (units within packing): 1 m	DIN EN 60068-2-32
Vibration Resistance	10 Hz - 57 Hz: with an amplitude of 0.0375 mm for continuous operation (peak amplitude of 0.075 mm) 57 Hz - 150 Hz: 0.5 g constant acceleration for continuous operation (1 g constant acceleration occasionally) 1 octave/minute, 10 frequency sweeps (sinusoidal), all 3 spatial axes	DIN EN 60068-2-6
Shock Resistance	15 g occasionally, 11 ms, sinusoidal half-wave, 2 shocks in all three spatial axes	DIN EN 60068-2-27
Class of Protection	IP 65 front end when built-in with gasket IP 40 rear end	EN 60529
Mounting Position	Any position, integrated into stationary housing	

Electrical Safety

Operating Parameters - Electrical Safety		
Parameter	Value	Reference
Protection Class	III	DIN EN 61131-2
Overvoltage Category	II	DIN EN 50178

EMC - Immunity to Interference

Operating Parameters - EMC (Immunity to Interference)		
Interference Immunity: Enclosure		
Parameter	Value	Reference
Electromagnetic RF Field, amplitude-modulated	Frequency band: 27 - 1,000 MHz; Test field strength: 10 V/m AM 80 % at 1 kHz Criterion A	DIN EN 61000-6-2 DIN EN 61131-2 DIN EN 61000-4-3
Magnetic field with mains frequency	50 Hz 30 A/m	DIN EN 61000-6-2 DIN EN 61000-4-8
ESD	Discharge through air: Test peak voltage 15 kV (Humidity Rating RH-2 / ESD-4) Contact discharge: Test peak voltage 4 kV (severity level 2) criterion A	DIN EN 61000-6-2 DIN EN 61131-2 DIN EN 61000-4-2
Interference Immunity: Signal Ports		
Parameter	Value	Reference
Asymmetric RF, amplitude-modulated	Frequency 0.15 - 80 MHz Test voltage 10 V AM 80 % at 1 kHz Source Impedance 150 W Criterion A	DIN EN 61000-6-2 DIN EN 61000-4-6
Bursts	Test voltage 1 kV tr/tn 5/50 ns Repetition frequency 5 Hz Criterion A	DIN EN 61000-6-2 DIN EN 61131-2 DIN EN 61000-4-4

EMC - Emitted Interference

Operating Parameters - EMC (Emitted Interference)		
Parameter	Value	Reference
Enclosure	Frequency band 30 MHz to 230 MHz, limit 30 dB (µV/m) in 10 m Frequency band 230 MHz to 1,000 MHz, limit 37 dB (µV/m) in 10 m (class B)	DIN EN 50081-1 DIN EN 50081-2 DIN EN 55011

C: Glossary General

A/D	**A**nalog/**D**igital
AC	**A**lternating **C**urrent
AM	**A**mplitude **M**odulated
CAN	**C**ontroller **A**rea **N**etwork
CE	**C**ommunautés **E**uropéenes or Windows CE
COM	**COM**unication; The first serial port is identified as COM 1, the second as COM 2, etc.
CTS	**C**lear **T**o **S**end
D/A	**D**igital/**A**nalog
DC	**D**irect **C**urrent
DIN	**D**eutsches **I**nstitut für **N**ormung = German Industry Standard
EC Low Voltage Directive	To be considered when using electric devices of a rated voltage between 50 V and 1,000 V AC and between 75 V and 1,500 V DC.
Electro-Magnetic Compatibility (EMC)	Definition according to the EMC regulations: "EMC is the ability of a device to function in a satisfactory way in an electro-magnetic environment without causing electromagnetic disturbances itself, which would be unbearable for other devices in this environment."
EMC	**E**lectro**M**agnetic **C**ompatibility Definition according to the EMC regulations: "EMC is the ability of a device to function in a satisfactory way in an electro-magnetic environment without causing electromagnetic disturbances itself, which would be unbearable for other devices in this environment."
EN	**E**uropäische **N**orm, that is: European Standard
ESD	**E**lectro **S**tatic **D**ischarge
EU	**E**uropean **U**nion
Firmware	Startup routines and low-level software are stored in the firmware. Firmware falls between software and hardware in terms of ease of modification.

FPGA	**F**ield **P**rogrammable **G**ate **A**rea; Programmable integrated circuit within digital technology
Hazard Analysis	Extract from the Machinery Directive 98/37/EC: The manufacturer is under an obligation to assess the hazards in order to identify all of those which apply to his machine; he must then design and construct it taking account of his assessment.
IEC	**I**nternational **E**lectrotechnical **C**ommision
IP	**I**nternational **P**rotection or **I**nternet **P**rotocol
Jetter System Bus	The Jetter system bus is a system-bus system of a cable length of 200 m max., and of fast data transmission rates of 1 Mbit/s. In addition to this, the Jetter system bus is highly immune to interferences. Therefore, the Jetter system bus is suited to realise field bus applications in a limited space.
JetWeb	Control technology comprising control systems, motion systems, user interfaces, visualization devices, remote I/Os and industrial PCs. Programming by means of multitasking and a modern sequence-oriented language. Communication by means of Ethernet TCP/IP and making use of the Web technologies.
LED	**L**ight-**E**mitting **D**iode
NN	**N**ormal **N**ull = Sea Level
RS-232	An accepted industry standard for serial data transmission. RS: **R**ecommended **S**tandard For transmission distances of less than 15 m. No differential evalution. Transmitting and receiving on different lines.
RS-422	An accepted industry standard for serial data transmission. RS: **R**ecommended **S**tandard For transmission distances over 15 m. Two differential evalutions each.Transmitting and receiving on different lines.
RS-485	An accepted industry standard for serial data transmission. RS: **R**ecommended **S**tandard For transmission distances over 15 m. Two lines with differential evaluation. Transmitting and receiving on the same line.
RTS	

	Request **T**o **S**end
RxD	Receive (**RX**) **D**ata
	A line used to carry received serial data from one device to another.
SELV	Safe Extra Low Voltage:
	Voltage, which, under all operating conditions will not exceed a peak or DC voltage of 42.4 V. This voltage is either measured between two conductors or between one conductor and earth.
	The circuit, in which this voltage occurs, must be separated from the mains power supply by a safety isolating transformer or some equivalent.
SUB-D	Type name of a plug-in connector
th	Hold time of a burst ('time hold')
tn	Total time of burst ('time normal')
tr	Rise time of burst ('time rise')
TXD	Transmit (**TX**) **D**ata
	A line used to carry transmitted serial data from one device to another.
Vcc	Supply voltage; generally DC 5 V

D: Glossary HMI

Active Sync	A tool by Microsoft which is for ensuring communication with the target system.
CSTN	**C**olour **s**uper **t**wist **n**ematic
FAT	**F**ile **A**llocation **T**able A table in MS-DOS to manage disk space used for file storage.
FTP	**F**ile **T**ransfer **P**rotocol
MMC	**M**ulti **M**edia **C**ard, a removable flash memory medium
Queue	A multi-element data structure from which elements can be removed only in the same order in which they were inserted; that is, it follows a first in, first out constraint.
Registry	A central hierarchical database in Windows systems used to store information necessary to configure the system for one or more users, applications and hardware devices.
SaveRegistry	Windows CE application for saving the registry.
SD	**S**ecure **Di**gital Secure Digital (SD) is a flash (non-volatile) memory card format for use in portable devices, including digital cameras, handheld computers, PDAs and GPS units.
TFT	**T**hin **f**ilm **t**ransistor
Touchkey	When pressing a touchkey a keyboard even is generated.
USB	**U**niversal **S**erial **B**us
VGA	640 x 480 resolution

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